

(19) World Intellectual Property Organization  
International Bureau



14 JUN 2005



(43) International Publication Date  
8 July 2004 (08.07.2004)

PCT

(10) International Publication Number  
WO 2004/056390 A1

(51) International Patent Classification<sup>7</sup>: A61K 39/15, 39/23, 39/245, 39/295, C12N 7/04, A61P 31/12, 31/22

(21) International Application Number:  
PCT/US2003/040823

(22) International Filing Date:  
18 December 2003 (18.12.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/434,683 19 December 2002 (19.12.2002) US

(71) Applicant (for all designated States except US): AKZO NOBEL PATENT DEPARTMENT [NL/NL]; Velperweg 76, 6824 BM Arnhem, NL-6824 The Netherlands (NL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): GORE, thomas [US/US]; 30665 Foxchase Drive, Salisbury, MD 21804 (US). MOCKETT, Adrian [GB/GB]; 1 Blenheim Close, Warboys, Huntington, Cambridgeshire PE282XF (GB).

(74) Agent: RAMEY, William, P., III; Akzo Nobel, N.V., Intervet Inc., 405 State Street, P.O. Box 318, Millsboro, DE 19966 (US).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

— of inventorship (Rule 4.17(iv)) for US only

Published:

— with international search report  
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2004/056390 A1

(54) Title: TRIVALENT VACCINE WITH MATERNAL ANTIBODY TRANSFER VIA THE MILK

(57) Abstract: Embodiments of the present invention generally relate to novel multivalent vaccines and methods of vaccinating. In an embodiment, the present invention is a trivalent vaccine for canine herpesvirus (CHV), canine rotavirus (CRV), and Minute virus of canine (MVC) or other canine parvovirus delivered to pups of a whelp through colustrums and providing sufficient antibody titer to impart protection.